

General / SS Organization**Inspection:**

1	Questions sent to water system on:	Date	None
4	Management assessment	Date	None
5	Security Assessment	Date	None
6	Facility walk-thru. (If multiple dates, list first day of survey)	Date	None
9	Date water system given initial draft verbal report (Usually same date as walk-thru)	Date	None

General / SS Organization**Milestone Tracking:**

1	ID and prioritize sanitary risks	Date	None
3	Complete sanitary survey report	Date	None
4	Future GW Rule tracking date.	Date	None
5	Official notification of survey results sent to water system.	Date	None
6	Follow-up on action taken by the system to eliminate sanitary risks	Date	None

General / Background Info**Name/Location:**

1	1	Name of public water system:	Text	None
2		PWS number:	Text	None
3		Physical address	Text	None
6		County:	Text	None

General / Background Info**Classification:**

1		Total System - Design Water Production / Treatment Capacity (MGD):	Numeric	None
2	5	Actual average daily demand (MGD):	Numeric	None
3	5	Gallons per capita per day:	Numeric	None
4	5	Actual peak daily demand (MGD):	Numeric	None
5		SDWA classification of system	DropDown	None
6		Number of service connections:	Numeric	None
6.1		Number of residential connections:	Numeric	None
6.2		Number of commercial and industrial connections.	Numeric	None
6.3		Number of other connections.	Numeric	None

QuestionNumber		Sanitary Survey Questions --- Utah	Response Type	Correct Response
7	Residential population:		Numeric	None
8	Recent modifications?		YesNoLeadin	None
8.1	DDW review of recent modifications:		YesNo	Yes
8.2	Recent modifications - description		Text	None
9	Seasonal operation?		YesNoLeadin	None
9.1	Date open:		Date	None
9.2	Date closed		Date	None
10	Purchase water?		YesNoLeadin	None
10.1	If yes, name of system purchased from:		Text	None
10.2	System purchased from - PWS number:		Text	None
12	Sell water?		YesNoLeadin	None
12.1	If yes, name of system sell to:		Text	None
12.2	System(s) sold to PWS number:		Text	None

General / Background Info

Owner:

1	Owner type:	DropDown	None
2	Legal ownership by (name or entity)	Text	None
3	Principal Executive or CEO	Text	None
4	Owner's address	Text	None
5	Owner's telephone - day	Text	None
6	Owner's telephone - night	Text	None
7	Owner's email address	Text	None

General / Background Info

Staff:

1	System Manager's name	Text	None
2	System Manager's address	Text	None
3	System manager's telephone - day	Text	None
4	System manager's telephone - night	Text	None
5	System manager's email address	Text	None
6	Main operator's name	Text	None
7	Main operator's address	Text	None
8	Main operator's telephone - day	Text	None

QuestionNumber		Sanitary Survey Questions --- Utah	Response Type	Correct Response
9	Main operator's telephone - night		Text	None
10	Main operator's email address		Text	None
11	Main Operator's Certification Level		Text	None
12	Certificate ID Number		Text	None
13	Date Issued		Date	None
14	Date Expires		Date	None
15	List all certified operators:		Text	None
16	Emergency contacts: Day - name		Text	None
17	Emergency contacts: Day - telephone number		Text	None
18	Emergency contacts: Night - name		Text	None
19	Emergency contacts: Night - telephone number		Text	None

General / Background Info

Previous Survey Info:

1	Date of last sanitary survey:	Date	None
2	Last survey conducted by	Header	None
2.1	Name	Text	None
2.2	Organization	Text	None
2.3	Phone:	Text	None
2.4	e-mail	Text	None
3	List of deficiencies from previous survey	Header	None
3.1	Have all deficiencies noted during the previous survey been corrected?	YesNo	Yes
3.2	If no, list item numbers for remaining deficiencies.	Text	None

General / Background Info

Current Survey Info / History:

1	Have there been any violations in the past year?	YesNo	No
	Is the system subject to an exemption, variance or order?	YesNoLeadin	None
1.1	If yes, list violations	Text	None
2	Have there been any unplanned interruptions in service during the past year?	YesNo	No

General / Background Info

Current Survey Info / Participants:

1	Current Survey Date:	Date	None
2	Survey performed by:	Header	None

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
2.1	Name		Text	None
2.2	Title		Text	None
2.3	Organization		Text	None
3	Water system representatives present during the survey:		Header	None
3.1	Name #1:		Text	None
3.2	Title #1:		Text	None
3.3	Name #2:		Text	None
3.4	Title #2:		Text	None
3.5	Name #3:		Text	None
3.6	Title #3:		Text	None

General / Background Info

Current Survey Info / Sampling:

1	1	Were samples taken at the time of survey?	YesNoLeadin	None
1.1		If yes, what samples and the results?	Text	None
1.2		List follow up actions the system has done.	Text	None

General / SDWIS Site Visit Info

1		Reason for the visit.	DropDown	None
2		Date of the survey	Date	None
3		Status of site visit.	DropDown	None
4		Source evaluation:	DropDown	None
5		Treatment sytem evaluation:	DropDown	None
6		Distribution system evaluation:	DropDown	None
7		Finished water storage evaluation:	DropDown	None
8		Pump and pumping facility evaluation:	DropDown	None
9		Monitoring and requirements evaluation:	DropDown	None
10		System management and operations evaluation:	DropDown	None
11		Operator compliance with state requirements:	DropDown	None
12		Other element evaluated:	DropDown	None
13		Last name of inspector:	Text	None
14		First name of inspector:	Text	None
15		Inspector organization	Text	None

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
16	Water system notification date		Date	None
17	Next inspection due date:		Date	None

Regulations / Plans/Records

1	1	Is a total coliform rule (TCR) sample siting plan available for review?	DropDown	Yes
1.1	1	Does the (TCR) sample siting plan meet the minimum requirements?	YesNo	Yes

Regulations / Monitoring

1	1	Is the current information in state files accurate for population served and number of services?	YesNo	Yes
2	1	Is the current information on the status of the system correct, i.e. large enough to be a PWS, type of system, i.e. CWS, NCWS, NTNCWS.	YesNo	Yes
3	2	Are laboratory facilities or appropriate test kits available at the plant to enable staff to perform appropriate process control testing?	YesNo	Yes

Regulations / Enforcement

1.1	1	Is the system complying with conditions set forth in any variances, exemptions or orders?	YesNo	Yes
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Management / General

2	4	Does the utility maintain an updated list of critical customers?	YesNo	Yes
3	3	Are customer water quality complaints recorded?	YesNoLeadin	Yes
3.1	3	Are complaints responded to immediately?	YesNo	Yes
4	2	Have any major complaints been received since the last sanitary survey? If yes, list in comments section.	YesNo	No
8	4	Is a water conservation program in effect?	YesNoLeadin	Yes
8.1		What type of rate plan does the system have?	DropDown	None
9		Are customer water quality complaints aggressively investigated?	YesNo	Yes
10		Is there a procedure in place to respond immediately to a customer complaint about a new taste, odor, color, or other physical change (oily, filmy, burns on contact with skin, etc)	YesNo	Yes

Management / Planning

General:

2	4	Is there a master plan showing proposed construction and or replacement of lines?	YesNo	None
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Management / Policies

2.6	2	Discontinuance of service to any facility where suitable backflow prevention has not been provided for a cross connection?	YesNo	Yes
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QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
3	2	Is the program active and effective in controlling cross-connections?	YesNo	Yes
4	2	Are backflow preventers at treatment plants and other facilities owned by the water system tested annually?	YesNo	Yes

Management / Policies

General:

1	Does the system have contracts for tanker trucks or with bottled water companies, stating the required time frame for delivery?	YesNo	None
2	Is this time frame reflected in the emergency plan?	YesNo	None

Management / Construction Standards

1	4	Is there a set of construction standards used by the utility?	YesNo	None
2	4	Have the systems construction standards been reviewed by DDW?	YesNo	None

Management / Safety

1	4	Has the utility complied with the safety requirements as prescribed by OSHA?	YesNo	Yes
2	3	Is there a Hazard Communication Program in place?	YesNo	Yes
3	3	Is appropriate Personal Protective Equipment (PPE) provided for each operator?	YesNo	Yes
4	4	Have the operators been trained in safety procedures and equipment?	YesNo	Yes
4.1	4	If yes, is safety training an on-going and regular program?	YesNo	Yes
5		Are permanent ladders or handholds provided on the inside walls of basins above the water level?	YesNo	Yes
6		Does the PWS provide stairways, ladders and handrails where needed?	YesNo	Yes
7		Are treads of non-slip material provided where needed?	YesNo	Yes
8		Is ventilation provided in all rooms, compartments, pits and other enclosures where unsafe atmosphere may develop or where excessive heat may be?	YesNo	Yes
9		Are all confined space entry procedures done in accordance with OSHA requirements?	YesNo	Yes
10		Is there appropriate safety equipment (e.g. cartridge respirator for calcium hypochlorite) and Personal Protective Equipment (e.g. goggles, gloves, etc.) available and in use?	YesNo	Yes
11		Is deluge shower and /or eyewashing device installed where strong acids and alkalis are used or stored?	YesNo	Yes
12		Have all field workers been trained in the use of traffic control equipment?	YesNo	Yes

Management / Financial

Capacity:

1	How often does the governing body review the financial information?	Text	None
2	If yes, which general methodology is used?	DropDown	None

Management / Emergency Response

1	Does your system serve less than 3300 in population?	YesNoLeadin	None
1.1	Does your system have a written Emergency Response Plan?	YesNo	Yes
1.2	Is your Emergency Response Plan current?	YesNo	Yes
2	Does your system serve a population of 3300 or greater?	YesNoLeadin	None
2.1	Does your system have the EPA required Emergency Response Plan for systems serving greater than 3300 population?	YesNo	None
2.3	Has your Emergency Response Plan been updated within the last 12 months?	YesNo	Yes

Management / Cross-Connections

1	Are there any unprotected connections between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system?	YesNo	No
2	Does the water system have a program to control the use of fire hydrants?	YesNo	Yes
3	Does the water system have the following elements of a written cross-connection control program ?	Header	None
3.01	Legally adopted authority statement?	YesNo	Yes
3.02	Documentation of annual public awareness and/or employee training?	YesNo	Yes
3.03	Documentation of personnel trained to manage the program with documentation?	YesNo	Yes
3.04	Records of hazards found, protection required and installed, enforcement actions, assembly testing etc.?	YesNo	Yes
3.05	Documentation of on-going program enforcement? (ie records of periodic hazard assessments, annual test report, updated assembly inventory, etc)	YesNo	Yes

Management / Staffing

2	Does this PWS have a governing body or board of directors?	YesNo	None
3	If no governing body, please indicate who is in responsible charge.	Text	None
4	How often does the board meet?	DropDown	None
5	What is the operator certification level required for this facility?	Text	None
6	2 Is the main operator properly certified?	YesNo	Yes
7	2 Is a certified operator available at all times as required by the authority?	YesNo	Yes
10	3 Are personnel adequately trained?	YesNo	Yes
12	3 Do operating staff have authority to make required operation, maintenance, and/or administrative decisions affecting plant performance and reliability?	YesNo	Yes
14	Is the system subject to Public Service Commission Oversight?	YesNo	None

Management / Source Protection

1	Is the designated person listed at DDW the correct person, and is their phone number and address current?	YesNo	Yes
2	Is there a current copy of each of the DWSP Plans on the premises of the water system? (If this is a transient non-community, they should have a copy of their assessment plan on the premises.)	YesNo	Yes
3	Are the Plans kept up to date in order to show current conditions in the DWSP zones, including:	Header	None
3.01	1 - Inventory of potential contamination sources?	YesNo	Yes
3.02	2 - Implementation of land management strategies in the recordkeeping section? The recordkeeping section must include copies of ordinances, codes, permits, public education programs, minutes of meetings, etc.	YesNo	Yes
4	Are there any new sources for which a Preliminary Evaluation Report has not been submitted?	YesNo	No
5	Are there any old sources that have come into use for which a DWSP Plan has not been submitted?	YesNo	No
6	Has there been reconstruction or redevelopment of any ground-water source for which a revised DWSP Plan has not been submitted?	YesNo	No

Sources / General**General:**

1	Are there any sources not on the system inventory that are connected to the system?	YesNoLeadin	None
2	3 Is the undocumented source(s) physically connected to the drinking water system?	YesNo	No

Sources / Groundwater**Wells / General:**

1	5 Is drawdown measured?	YesNo	Yes
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Sources / Groundwater**Wells / Security:**

1	2 Is the wellhead properly protected against unauthorized personnel?	YesNo	Yes
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Sources / Groundwater**Wells / Construction:**

1	5 What is the depth of the well in feet?	Numeric	None
2	5 What is the depth of the casing in feet?	Numeric	None
3	5 What is the depth of grouting in feet?	Numeric	None
4	2 Does the casing extend a minimum of 18 inches above the finished ground surface or 12 inches above the well house floor?	YesNo	Yes
5	3 Is grouting or a concrete pad surrounding the casing at the well?	YesNo	Yes
6	1 Is the sanitary seal properly installed and maintained?	YesNo	Yes
7	2 Is the pitless adapter designed, constructed and installed to be water tight including the cap, cover, casing extension and other attachments?	YesNo	Yes
8	2 Is the well casing vented?	YesNoLeadin	None

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
8.1	Is the open end of the vent screened and terminated downward with an appropriate air gap above the ground or pumphouse floor?		YesNo	Yes
9	2 Is the discharge line from the well equipped with the necessary valves and appurtenances to allow the well to be pumped to waste via an approved air gap?		YesNo	Yes
<u>Sources / Groundwater</u>				
Springs / General:				
1	2 Is a proper sample tap provided?		YesNo	Yes
2	3 Is a flow meter or other flow measuring device provided?		YesNo	Yes
<u>Sources / Groundwater</u>				
Springs / SW Protection:				
1	2 Is the spring housed in a permanent structure and protected from contamination including the entry of surface water, animals and dust?		YesNo	Yes
2	2 Is the site subject to flooding?		YesNo	No
3	2 Is the area upgradient within 50 feet of the spring collection devices fenced to prevent access by livestock and sources of contamination?		YesNo	Yes
4	2 Is surface water and drainage ditches diverted from the 50 feet protection zone around the spring?		YesNo	Yes
<u>Sources / Groundwater</u>				
Springs / Construction:				
1	2 Is the overflow and/or drain pipe properly screened (#4 mesh) and have a minimum of 12 inches freefall?		YesNo	Yes
2	Is the spring collection area developed to minimize ponding of surface water?		YesNo	Yes
3	Does the spring have 10 feet of impervious soil cover or two feet of cover with an acceptable liner?		YesNo	Yes
4	Is the spring collection area void of deep rooted vegetation?		YesNo	Yes
5	Is there any evidence of roots in the collection lines?		YesNo	No
6	Is a spring collection box present?		YesNoLeadin	None
6.1	Does the spring box have a proper shoe box type lid?		YesNo	Yes
6.2	Is the lid properly gasketed?		YesNo	Yes
6.3	If a vent is present on the spring or collection box is it properly down-turned, screened (#14 mesh) and air gapped?		YesNo	Yes
6.4	Is the access to the spring box at least 18 inches above the ground surface or 4 inches above a concrete surface?		YesNo	Yes
6.5	Is the spring box secured against unauthorized entry?		YesNo	Yes
<u>Sources / Surface Water</u>				
General:				
1	Does the system monitor raw water so that it has a baseline that will allow system operators to know if there has been a contamination incident?		YesNoLeadin	Yes
1.1	If yes, is pH monitored?		YesNo	Yes
1.2	turbidity?		YesNo	Yes
1.3	total and fecal coliform?		YesNo	None

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
1.4	total organic carbon?		YesNo	Yes
1.5	specific conductance?		YesNo	None
1.6	ultraviolet adsorption?		YesNo	None
1.7	color and odor?		YesNo	None
1.8	other?		Text	None

Sources / Surface Water

Infiltration Galleries / Construction:

1	2	Is there a lid over the gallery?	YesNo	Yes
2	2	Is the lid watertight and locked?	YesNo	Yes
3	3	Is the collector in sound condition and maintained as necessary?	YesNo	Yes

Sources / Surface Water

Reservoirs, Lakes, Rivers, Streams / General:

1	3	Are multiple intakes located at different levels?	YesNoLeadin	Yes
1.1	3	Are they utilized?	YesNo	Yes
2	3	Is the highest quality water being drawn?	YesNo	Yes
4		Is there any treatment provided in the reservoir?	YesNoLeadin	None
4.1		If yes, describe.	Text	None

Sources / Surface Water

Reservoirs, Lakes, Rivers, Streams / SW Protection:

1	2	Is the area around the intake(s) free from potential sources of pollution?	YesNo	Yes
2	3	Is the area around the intake restricted for a radius of 200 feet?	YesNo	Yes
3		How often are intakes inspected?	DropDown	None

Treatment / General

General:

1	3	Is a schematic of the treatment facility readily available and up to date?	YesNo	Yes
2	2	Are there at least two parallel units for each critical treatment process?	YesNo	Yes
3	2	Is a finished water sampling tap provided?	YesNo	Yes
4	3	Is the facility performing adequate process control testing consistent with the specific treatment process?	YesNo	Yes
5	3	Is there any recycling being performed from waste stream?	YesNoLeadin	None
5.1	2	If yes, where does the recycle water enter the treatment plant?	Text	None
6	2	For all surface water plants that serve a population greater than 3300, do they have equipment to measure chlorine residuals continuously entering the distribution system?	YesNo	Yes

Question	Number		Response Type	Correct Response
8	2	Are pre- and post-chlorination systems, for all facilities treating surface water, independent to prevent possible siphoning of raw or partially treated water into the clear well?	YesNo	Yes
9	2	Is the disinfectant contact time, "T," determined each day during peak hourly flow?	YesNo	Yes

Treatment / General

Lab/Monitoring:

1	2	Are appropriate testing facilities provided consistent with proper monitoring of the specific treatment process?	YesNo	Yes
3	2	Do all chemical reagents have an unexpired shelf life?	YesNo	Yes

Treatment / General

Cross-Connections:

1		Are unprotected cross-connections present at the water treatment plant?	YesNoLeadin	None
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Treatment / General

Chemical Use:

1		Are dry chemicals used?	YesNoLeadin	None
1.01		Does the dry chemical feeder measure the quantity of chemical fed volumetrically or gravimetrically?	DropDown	None
1.02		Does the dry chemical feeder provide adequate solution water and agitation of the chemical in the solution pot?	YesNo	Yes
1.03		Does the dry chemical feeder provide gravity feed from the solution pots?	YesNo	None
1.04		Are provisions made for the proper transfer of dry chemicals from shipping containers to storage bins or hoppers, in such a way as to minimize the quantity of dust which may enter the room in which the equipment is installed?	YesNo	Yes
1.05		Does the dry chemical feeder completely enclose chemicals to prevent emission of dust?	YesNo	Yes
1.06		Are provisions made for disposing of empty bags, drums or barrels by a procedure which will minimize exposure to dusts?	YesNo	Yes
2		Are liquid chemicals used?	YesNoLeadin	None
2.01		Are chemical feeders of the positive displacement type?	YesNo	Yes
2.02		Is cross-connection control provided on the service water lines that feed the solution tanks?	YesNo	Yes
2.03		Is each tank provided with a valved drain, protected against backflow?	YesNo	Yes
2.04		Do overflow pipes, when provided, have free fall discharge?	YesNo	Yes
2.05		Are overflow pipes, when provided, located where they can be readily monitored?	YesNo	Yes
2.06		Are overflow pipes, when provided, turned downward with the end screened?	YesNo	Yes
2.07		Are subsurface locations for solution tanks free from sources of possible contamination?	YesNo	Yes
2.08		Do subsurface locations for solution tanks have positive drainage for groundwater, accumulated water, chemical spills and overflows?	YesNo	Yes
2.09		If a motor-driven transfer pump is provided, is a liquid level limit switch and an over-flow from the day tank operable?	YesNo	Yes
2.1		Are there adequate spill containment provisions?	YesNo	Yes
2.11		Are acid storage tanks provided with separate vents that terminate to the outside atmosphere?	YesNo	Yes

Sanitary Survey Questions --- Utah

2.12	Is a means provided to measure the solution level in the day tank or storage tank?	YesNo	Yes
3	Are chemical feeders and pumps operated at no lower than 20 percent of the feed range?	YesNo	Yes
4	Is an anti-siphon device provided so that liquid chemical solutions cannot be siphoned through solution feeders into the water supply?	YesNo	Yes
5	Are tanks and tank refilling line entry points properly labeled to designate the correct chemical ?	YesNo	Yes
6	Are chemicals stored in covered or unopened shipping containers? (unless the chemical is transferred into an approved storage unit)	YesNo	Yes
7	Are safe practices followed during chemical handling and mixing?	YesNo	Yes
8	Is cross-connection control provided so that no direct connections exist between any sewer and a drain or overflow from the feeder, solution chamber or tank?	YesNo	Yes
9	Is all chemical feed equipment operable and in good condition?	YesNo	Yes
10	Are spare parts available for all chemical feeders?	YesNo	Yes
11	Are the feeders manually or automatically controlled?	DropDown	None
12	Are instrumentation and controls for the process adequate, operational, and utilized?	YesNo	Yes
13	Are the chemical feeders flow paced?	YesNo	Yes
14	Is there proper anti-siphon protection on each feed pump?	YesNo	Yes
15	Are feed lines labeled or color coded according to accepted standards?	YesNo	Yes
16	Are feed lines protected against freezing?	YesNo	Yes
17	Are feed lines made of durable, corrosion-resistant material?	YesNo	Yes
18	Are all chemicals conducted from the feeder to the point of application in separate conduits?	YesNo	Yes
19	Is there adequate space in the facility for storage of all chemicals required in the treatment process?	YesNo	Yes
20	Are the chemical storage areas clean and dry?	YesNo	Yes
21	Are incompatible chemicals stored separately?	YesNo	Yes
22	Do daily operating records reflect chemical dosages and total quantities used?	YesNo	Yes
23	Are all chemical feeders properly calibrated to ensure accurate feed rates?	YesNo	Yes
24	Are provisions made for measuring the quantities of chemicals used?	YesNo	Yes
25	Can chemical feed lines be cleaned or flushed?	YesNo	Yes
26	Are chemical shipping containers labeled to include chemical name, purity and concentration, supplier name and address & ANSI/NSF certification?	YesNo	Yes
27	Are acids and caustics kept in closed corrosion-resistant shipping containers or storage units?	YesNo	Yes
28	Are vents from feeders, storage facilities and equipment exhaust discharged to the outside atmosphere above grade and remote from air intakes?	YesNo	Yes
29	Are all chemicals and water contact materials approved by an ANSI/NSF accredited organization?	YesNo	Yes
30	Is there a minimum of two feeders provided for each critical chemical feed application?	YesNo	Yes

Treatment / General**Waste Disposal:**

1	3	Are process and plant waste discharged to anything other than a community sewer? If yes explain.	YesNo	None
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2	4	Are holding tanks of such a size that it will contain the anticipated volume of waste wash water produced by the plant when operating at design capacity?	YesNo	Yes
3	3	If the plant has two production filters, does it have a holding tank that will contain the total waste wash water from both filters?	YesNo	Yes

Treatment / Activated Carbon

Granular:

1	3	Are granular activated carbon (GAC) filters used for removal of organic material that may be available as DBP precursors?	YesNoLeadIn	Yes
1.01	3	If yes, what is the depth of the GAC media in feet?	Numeric	None
1.02	3	What is the empty bed contact time (EBCT)?	Text	None
1.03	3	Is backwashing assisted by an air scour system?	YesNo	Yes
1.04	3	What is the frequency of GAC regeneration?	Text	None
2		What are filter effluent quality goals?	YesNo	Yes
3		What type of filtration media system is being utilized?	DropDown	None
4		What is the average and maximum filtration rate utilized throughout the year?	Text	None
5		Are media depths periodically checked against design standards?	YesNo	Yes
6		When was the last time the filters were evaluated to determine the condition of the media?	Date	None
8		Are filter run times consistent throughout the year?	YesNo	Yes
9		What criteria is used to determine when a filter backwash is required?	DropDown	None
10		Is there an SOP for the backwash procedure?	YesNo	Yes
11		What is the minimum and maximum backwash rate used?	Text	None
12		Are the filters equipped with a surface wash or air scour system to enhance the efficiency of the backwash process?	DropDown	Yes
13		Is filter-to-waste practiced at the end of a backwash?	YesNo	Yes
14		Do you start up on dirty filters?	YesNo	No

Treatment / Activated Carbon

Powdered:

1		Is PAC being added for removal of organic material ?	YesNoLeadIn	None
1.01		Is PAC added as early as possible in the treatment process to provide maximum contact time?	YesNo	Yes
1.02		If the PAC is added by a dry-feed machine, is it properly wetted?	YesNo	Yes
1.03		Is the PAC applied before the application point of chlorine or any other oxidant?	YesNo	Yes
1.04		Is the addition of PAC provided at several points in the system?	YesNo	Yes
1.05		Is a separate room provided for PAC feed installations and equipped with explosion-proof electrical outlets, lights and motors?	YesNo	Yes
1.06		Is the PAC stored in a room separate from any other chemicals?	YesNo	Yes
1.07		Are provisions made for adequate dust control?	YesNo	Yes

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1.08	Is PAC being handled as a potentially combustible material and stored in a building or compartment as nearly fireproof as possible?	YesNo	Yes
2	Is cross connection control provided in the in-plant water supply?	YesNo	Yes
2.1	Is cross-connection control provided so that no direct connections exist between any sewer and a drain or overflow from the feeder, solution chamber or tank?	YesNo	Yes
3	Are hose-bibs provided with backflow prevention devices?	YesNo	Yes
4	Is all chemical feed equipment operable and in good condition?	YesNo	Yes
5	Is there a minimum of two feeders provided for each critical chemical feed application?	YesNo	Yes
6	Are spare parts available for all chemical feeders?	YesNo	Yes
7	Is the output of each chemical feed pump adequate to supply the required dose rate?	YesNo	Yes
8	Are the feeders manually or automatically controlled?	DropDown	None
9	If the system uses automatically operated facilities, are the chemical feeders electrically interconnected with the well or water supply pump?	YesNo	Yes
10	Are instrumentation and controls for the process adequate, operational, and utilized?	YesNo	Yes
11	Are the chemical feeders flow paced?	YesNo	Yes
12	Is there proper anti-siphon protection on each feed pump?	YesNo	Yes
13	Are feed lines labeled or color coded according to accepted standards?	YesNo	Yes
14	Are feed lines protected against freezing?	YesNo	Yes
15	Are feed lines made of durable, corrosion-resistant material?	YesNo	Yes
16	Are all chemicals conducted from the feeder to the point of application in separate conduits?	YesNo	Yes
17	Is the in-plant water supply ample in quantity and adequate in pressure?	YesNo	Yes
18	Is there adequate space in the facility for storage of all chemicals required in the treatment process?	YesNo	Yes
19	Are the chemical storage areas clean and dry?	YesNo	Yes
20	Are incompatible chemicals stored separately?	YesNo	Yes
21	Is there appropriate safety equipment (e.g. cartridge respirator for calcium hypochlorite) and PPE (e.g. goggles, gloves, etc.) available and in use?	YesNo	Yes
22	Is there a Hazard Communication Program in place?	YesNo	Yes
23	Have operators been trained to use the safety equipment?	YesNo	Yes
24	Are carts, elevators and other appropriate means provided for lifting chemical containers to minimize excessive lifting by operators?	YesNo	Yes
25	Are floor surfaces impervious, slip-proof and well drained ?	YesNo	Yes
26	Are vents from feeders, storage facilities and equipment exhaust discharged to the outside atmosphere above grade and remote from air intakes?	YesNo	Yes
27	Is a deluge shower and/or eyewashing device installed where strong acids and alkalis are used or stored?	YesNo	Yes
28	Are acids and caustics kept in closed corrosion-resistant shipping containers or storage units?	YesNo	Yes
29	Are all chemicals and water contact materials approved by an ANSI/NSF accredited organization?	YesNo	Yes
30	Do the operators know where all of the chemical application points are and which points are being utilized?	YesNo	Yes
31	Do daily operating records reflect chemical dosages and total quantities used?	YesNo	Yes

Sanitary Survey Questions --- Utah

32	Are all chemical feeders properly calibrated to ensure accurate feed rates?	YesNo	Yes
33	Is there at least a 30 days supply of each chemical maintained at all times?	YesNo	Yes
34	Are provisions made for measuring the quantities of chemicals used?	YesNo	Yes
35	Can chemical feed lines be cleaned or flushed?	YesNo	Yes
36	Are chemical shipping containers labeled to include chemical name, purity and concentration, supplier name and address & ANSI/NSF certification?	YesNo	Yes
37	Are delivered chemicals assayed?	YesNo	Yes

Treatment / Aeration**General:**

1	Is aeration being used as a means of taste and odor control?	YesNoLeadin	None
1.1	4 What type of aerator is being used?	Text	None
1.2	3 Is the aerator free of significant corrosion?	YesNo	Yes
1.3	4 Is the aerator taken out of service periodically for maintenance and cleaning?	YesNo	Yes
2	4 Is oxidation being accomplished using aeration?	YesNoLeadin	None
2.1	4 What type of aerator is being used?	Text	None
3	4 Is oxidation being accomplished using chemical addition?	YesNoLeadin	Yes
3.01	What chemical is being used to oxidize the bulk of the iron?	Text	None
3.02	Is pH adjustment being incorporated in the process?	YesNo	None
3.03	What is dose rate of each chemical applied?	Text	None

Treatment / Chlorination**General:**

1	2 During the past year, has the disinfection process operated uninterrupted while water was being produced? If no, describe in comments.	YesNo	Yes
2	2 Is the contact time between the point of disinfection and the first customer in compliance with regulatory requirements?	YesNo	Yes
3	3 Are spare parts available to replace parts subject to wear and breakage?	YesNo	Yes
4	Is there a means to measure the volume of water treated?	YesNo	Yes
5	What disinfectant residual is maintained at the entry point of the distribution system?	Text	None
6	Is at least a trace of residual maintained at all points in the distribution system?	YesNo	Yes
7	Are chlorine residuals tested at least three times a week in the distribution system?	YesNo	Yes
8	2 Is chlorine residual testing equipment (recognized in the latest EPA approved edition of Standard Methods for the Examination of Water and Wastewater) provided and is it capable of measuring residuals to the nearest 0.1 milligrams per liter?	YesNo	Yes
9	2 Does the PWS use the DPD method that utilizes the digital readout with a self-contained light source?	YesNoLeadin	Yes
9.01	When was the last time the testing instrument was calibrated?	Date	None
10	Are proper procedures being used for testing chlorine residual?	YesNo	Yes

QuestionNumber	Question	Response Type	Correct Response
11	Is the correct reagent used for testing free residual?	YesNo	Yes

Treatment / Chlorination

Chlorine Dioxide:

1	Does the system use chlorine dioxide for disinfection?	YesNoLeadin	None
1.01	2 Have provisions been made for proper storage and handling of sodium chlorite to eliminate any danger of fire or explosion associated with its powerful oxidizing nature?	YesNo	Yes
1.02	3 Is sodium chlorite stored by itself in a separate room and preferably stored in an outside building detached from the water treatment facility? (organic materials will catch fire and burn violently when in contact with chlorite).	YesNo	Yes
1.03	3 Is the storage structures constructed of noncombustible materials?	YesNo	Yes
1.04	3 If the storage structure must be located in an area where a fire may occur, is water available to keep the sodium chlorite area cool enough to prevent heat induced explosive decomposition of chlorite?	YesNo	Yes
1.05	3 Are positive displacement feeders provided?	YesNo	Yes
1.06	3 Is the tubing for conveying sodium chlorite or chlorine dioxide solutions of the Type 1 PVC, polyethylene or materials recommended by the manufacturer?	YesNo	Yes
1.07	3 Are feed lines installed in a manner to prevent formation of gas pockets and do they terminate at a point of positive pressure?	YesNo	Yes
1.08	3 Are check valves provided to prevent the backflow of chlorine into the sodium chlorite line?	YesNo	Yes
1.09	3 Are storage drums thoroughly flushed prior to recycling or disposal?	YesNo	Yes
2	Is there an automatic switch-over of chlorine cylinders provided to assure continuous disinfection?	YesNo	Yes
3	Is a weight scale provided for weighing chlorine gas cylinders / containers?	YesNo	Yes
4	Are the pipes carrying elemental liquid or dry gaseous chlorine under pressure made of Schedule 80 seamless steel tubing or other materials recommended by the Chlorine Institute (never use PVC)?	YesNo	Yes
5	Does the water supply to each eductor have a separate shut-off valve?	YesNo	Yes
6	Are gauges for measuring water pressure and vacuum at the inlet and outlet of each eductor provided?	YesNo	Yes
7	Are there any cross-connections in the chlorine feed makeup water or injection points?	YesNo	No
8	Is there a chlorine leak detector properly located for monitoring any leaks?	YesNo	Yes
9	Is there a means of chlorine leak detection available?	YesNoLeadin	Yes
10	If yes, what type?	DropDown	None
11	Is continuous chlorine leak detection equipment provided?	YesNo	Yes
12	Where a leak detector is provided, is it equipped with both an audible alarm and a warning light?	YesNo	Yes
13	Is there an appropriate leak repair kit approved by the Chlorine Institute provided?	YesNo	Yes
14	Is respiratory protection equipment, meeting the requirements of the National Institute for Occupational Safety and Health (NIOSH) available where chlorine gas is handled, and is it stored at a convenient location, but not inside any room where chlorine i	YesNo	Yes
15	Are cylinders and gas lines protected from temperatures above that of the feed equipment?	YesNo	Yes
16	Do pressurized chlorine feed lines carry chlorine gas beyond the chlorinator room?	YesNo	No
17	Is a scrubber provided to chemically neutralize chlorine gas before discharge from the water treatment plant building into the air?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah	Response Type	Correct Response
18	Is such equipment designed as part of the chlorine gas storage and feed areas to automatically engage in the event of any measured chlorine release?	YesNo	Yes
19	Is chlorine gas feed and storage enclosed and separated from other operating areas?	YesNo	Yes
20	Are the chlorinator rooms heated, and protected from excessive heat?	YesNo	Yes
21	Is the chlorine room constructed in such a manner that all openings between the chlorine room and the remainder of the plant are sealed?	YesNo	Yes
22	Is the chlorine room provided with doors equipped with panic hardware, assuring ready means of exit and opening outward only to the building exterior?	YesNo	Yes
23	Where chlorine gas is used, does the ventilating fan take suction near the floor as far as practical from the door and air inlet, with the point of discharge so located as not to contaminate air inlets to any rooms or structures?	YesNo	Yes
24	Where chlorine gas is used, are all air inlets located near the ceiling and fitted with louvers?	YesNo	Yes
25	Where chlorine gas is used, do louvers for chlorine room air intake and exhaust facilitate airtight closure?	YesNo	Yes
26	Where chlorine gas is used, are there separate switches for the fan and lights located outside of the chlorine room?	YesNo	Yes
27	Are outside switches protected from vandalism?	YesNo	Yes
28	Where chlorine gas is used, are vents from feeders and storage discharged to the outside atmosphere, above grade, screened and cleared?	YesNo	Yes
29	Is a bottle of ammonium hydroxide (56 per cent ammonia solution) available for chlorine leak detection?	YesNo	Yes
30	Are full and empty cylinders of chlorine gas restrained in position to prevent upset?	YesNo	Yes
31	Are full and empty cylinders of chlorine gas stored in rooms separate from ammonia storage?	YesNo	Yes
32	Are full and empty cylinders of chlorine gas stored in areas that are not in direct sunlight or exposed to excessive heat?	YesNo	Yes
33	Is the disinfectant applied at a point which will provide adequate contact time?	YesNo	Yes
34	What is the contact time in minutes before the first customer?	Text	None
35	Is the residual disinfectant concentration determined each day during peak hourly flow at each residual disinfectant sampling point at or before the first customer? (or at other times approved by the authority)	YesNo	Yes

Treatment / Chlorination

Gaseous Chlorination:

1	Does the system use chlorine for disinfection?	YesNoLeadIn	None
1.01	3 Does the system use automation, adjusting with flow and/or chlorine residual analyzer to automatically adjust feed rates?	DropDown	None
1.02	2 Are automatic chlorine residual recorders provided where the chlorine demand varies appreciably over a short period of time?	YesNo	Yes
1.03	2 Is there standby chlorination equipment of sufficient capacity available to replace the largest unit?	YesNo	Yes
1.04	2 Is there an alarm tied to interruptions in the chlorine feed?	YesNo	Yes
1.05	Are the chlorinator rooms heated, and protected from excessive heat?	YesNo	Yes
2	Is there an automatic switch-over of chlorine cylinders provided to assure continuous disinfection?	YesNo	Yes
3	Is a weight scale provided for weighing chlorine gas cylinders / containers?	YesNo	Yes
4	Does the water supply to each eductor have a separate shut-off valve?	YesNo	Yes
5	Where a leak detector is provided, it shall be equipped with both an audible alarm and a warning light. If the system uses 1 ton containers is continuous leak detection available?	YesNo	Yes

Sanitary Survey Questions --- Utah

6	For 150 lb cylinders is ammonia hydroxide (56%) available for leak detection?	YesNo	Yes
7	Is there an appropriate leak repair kit approved by the Chlorine Institute provided?	YesNo	Yes
8	Is respiratory protection equipment, meeting the requirements of the National Institute for Occupational Safety and Health (NIOSH) available where chlorine gas is handled, and is it stored at a convenient location, but not inside any room where chlorine is	YesNo	Yes
9	Is chlorine gas feed and storage enclosed and separated from other operating areas?	YesNo	Yes
10	Is the chlorine room constructed in such a manner that all openings between the chlorine room and the remainder of the plant are sealed?	YesNo	Yes
11	Where chlorine gas is used, does the ventilating fan take suction near the floor as far as practical from the door and air inlet, with the point of discharge so located as not to contaminate air inlets to any rooms or structures?	YesNo	Yes
12	Where chlorine gas is used, are all air inlets located near the ceiling and fitted with louvers?	YesNo	Yes
13	Where chlorine gas is used, do louvers for chlorine room air intake and exhaust facilitate airtight closure?	YesNo	Yes
14	Where chlorine gas is used, are there separate switches for the fan and lights located outside of the chlorine room?	YesNo	Yes
15	Where chlorine gas is used, are vents from feeders and storage discharged to the outside atmosphere, above grade, screened and cleared?	YesNo	Yes
16	Are full and empty cylinders of chlorine gas restrained in position to prevent upset?	YesNo	Yes
17	Are full and empty cylinders of chlorine gas stored in rooms separate from ammonia storage?	YesNo	Yes
18	Are full and empty cylinders of chlorine gas stored in areas that are not in direct sunlight or exposed to excessive heat?	YesNo	Yes
19	Are cylinders and gas lines protected from temperatures above that of the feed equipment?	YesNo	Yes
20	Are the pipes carrying elemental liquid or dry gaseous chlorine under pressure made of Schedule 80 seamless steel tubing or other materials recommended by the Chlorine Institute (never use PVC)?	YesNo	Yes
21	Are gauges for measuring water pressure and vacuum at the inlet and outlet of each eductor provided?	YesNo	Yes
22	Do pressurized chlorine feed lines carry chlorine gas beyond the chlorinator room?	YesNo	No
23	Is a scrubber provided to chemically neutralize chlorine gas before discharge from the water treatment plant building into the air?	YesNo	Yes
24	Are there any cross-connections in the chlorine feed makeup water or injection points?	YesNo	No

Treatment / Chlorination**Hypochlorination:**

1	Are hypochlorite feeders of the positive displacement type?	YesNo	Yes
2	Is cross-connection control provided on the service water lines that feed the solution tanks?	YesNo	Yes
3	Is each tank provided with a valved drain, protected against backflow?	YesNo	Yes
4	Do overflow pipes, when provided, have free fall discharge?	YesNo	Yes
5	Are overflow pipes, when provided, located where they can be readily monitored?	YesNo	Yes
6	Are overflow pipes, when provided, turned downward with the end screened?	YesNo	Yes
7	Are subsurface locations for solution tanks free from sources of possible contamination?	YesNo	Yes
8	Do subsurface locations for solution tanks have positive drainage for groundwater, accumulated water, chemical spills and overflows?	YesNo	Yes
9	If a motor-driven transfer pump is provided, is a liquid level limit switch and an over-flow from the day tank operable?	YesNo	Yes
10	Are acid storage tanks provided with separate vents that terminate to the outside atmosphere?	YesNo	Yes

11	Is there a procedure in place to ensure consistent strength of the chemical in the day tank?	YesNo	Yes
12	Is a means provided to measure the solution level in the day tank or storage tank?	YesNo	Yes
13	Are storage tanks and pipelines for liquid chemicals specified for use with individual chemicals and not used for different chemicals?	YesNo	Yes
14	Is the solution tank covered to minimize corrosive vapors?	YesNo	Yes

Treatment / Coagulation

General:

1	3	Does the water contain high turbidity and require pretreatment (sedimentation)?	YesNo	None
2	3	Does the pre-sedimentation process use the addition of a coagulation chemical?	YesNoLeadin	None
2.1	3	If yes, what is the coagulation chemical?	Text	None
3	3	Is there a minimum detention time of three hours?	YesNo	Yes
5	4	Does the presedimentation basin have continuous mechanical sludge removal equipment?	YesNo	Yes
7	4	Are provisions for bypassing the presedimentation basins provided?	YesNo	Yes

Treatment / Coagulation

Coagulation:

1	2	Is a primary coagulant used at all times the plant is in operation?	YesNo	Yes
2	2	What primary coagulant is being used?	DropDown	None
3	3	Is a coagulant aid or filter aid being added?	YesNo	None
4	2	Do you have a plan to determine coagulant dosage?	YesNo	Yes
5	2	Is the dosage rate of each chemical added calculated daily?	YesNo	Yes

Treatment / Filtration

General:

1	3	Are the filters operated to minimize flow variations?	YesNo	Yes
2	3	Are instrumentation and controls for the process operational, and in service?	YesNo	Yes
3	3	How frequently is the media recharged or backwashed?	Text	None
4	3	Is a sample tap provided prior to application of permanganate?	YesNo	Yes
5	3	What is the permanganate dose rate?	Text	None
6	3	Is a sample tap provided immediately ahead of filtration?	YesNo	Yes
7	3	Is a sample tap provided at the filter effluent?	YesNo	Yes
8	4	Is there an anthracite media cap of at least six inches provided over manganese coated media?	YesNo	Yes
9	3	Is settled backwash water recycled?	YesNo	None
10		What are filter effluent quality goals?	Text	None
11		What type of filtration media system is being utilized?	DropDown	None

Sanitary Survey Questions --- Utah

12	What is the average and maximum filtration rate utilized throughout the year?	Text	None
13	Are media depths periodically checked against design standards?	YesNo	Yes
14	When was the last time the filters were evaluated to determine the condition of the media?	Date	None
15	What are typical filter run times?	Text	None
16	Are filter run times consistent throughout the year?	YesNo	Yes
17	What criteria is used to determine when a filter backwash is required?	DropDown	None
18	Is there an SOP for the backwash procedure?	YesNo	Yes
19	What is the minimum and maximum backwash rate used?	Text	None
20	Are the filters equipped with a surface wash or air scour system to enhance the efficiency of the backwash process?	DropDown	Yes
21	Is filter-to-waste practiced at the end of a backwash?	YesNo	Yes

Treatment / Filtration**Cartridge:**

1	3	Is pretreatment used to prevent rapid fouling?	YesNo	Yes
2	3	What filter element is used in the cartridge?	DropDown	None
3	3	What is the filter pore size?	Text	None
4	3	How frequently are the filters cleaned per year?	Numeric	None
5	3	What is the typical time between filter replacements?	Text	None
6	2	Is disinfection being used to prevent fouling and reduce microbial pass-through?	YesNo	Yes
7	3	Is the filter media compatible with the housing?	YesNo	Yes

Treatment / Filtration**Diatomaceous Earth:**

1	4	Is the filter a pressure or vacuum type?	DropDown	None
2	3	Is the flow to the filters continuous?	YesNo	Yes
3	3	Is the minimum precoat thickness 1/8 inch?	YesNo	Yes
4	3	Is continuous body feed being used?	YesNo	Yes
5	3	What are typical filter run times in minutes?	Numeric	None
6	3	Is the filter septum inspected periodically?	YesNo	Yes
7	3	Is the filter septum cleaned regularly?	YesNo	Yes
8	4	How is the spent filter cake disposed of?	Text	None

Treatment / Filtration**Rapid Sand:**

1	What are filter effluent quality goals?	YesNo	Yes
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Sanitary Survey Questions --- Utah

2	What type of filtration media system is being utilized?	DropDown	None
3	What is the average and maximum filtration rate utilized throughout the year?	Text	None
4	Are media depths periodically checked against design standards?	YesNo	Yes
5	When was the last time the filters were evaluated to determine the condition of the media?	Date	None
6	Are filter run times consistent throughout the year?	YesNo	Yes
7	What criteria is used to determine when a filter backwash is required?	DropDown	None
8	Is there an SOP for the backwash procedure?	YesNo	Yes
9	What is the minimum and maximum backwash rate used?	Text	None
10	Are the filters equipped with a surface wash or air scour system to enhance the efficiency of the backwash process?	DropDown	Yes
11	Is filter-to-waste practiced at the end of a backwash?	YesNo	Yes
12	Do you start up on dirty filters?	YesNo	No

Treatment / Filtration**Slow Sand:**

1	3	Are there more than one filters?	YesNo	Yes
2	3	Are the filters housed or covered?	YesNo	Yes
3	3	What is the depth of the sand media in feet?	Numeric	None
4	3	Is the flow accurately measured to each filter?	YesNo	Yes
5	2	Are there adequate sampling taps from each filter?	YesNo	Yes
6	3	What is the average and maximum filtration rate employed?	Text	None
7	2	How often are the filters cleaned?	Text	None
8	3	Are head loss gauges used to determine when a filter is to be cleaned?	YesNo	Yes
9	3	How much media is removed when a filter is cleaned?	Text	None
10	3	Is a filter ripened before going back in service?	YesNo	Yes
11	3	What is the minimum depth of media allowable before additional sand is added in feet?	Numeric	None

Treatment / Filtration**Ultrafiltration:**

1	3	Which membrane filtration process is being used?	DropDown	None
2	3	What is the treatment objective for this particular membrane?	Text	None
3	3	Is pretreatment being utilized?	YesNo	Yes
4	3	How often is a membrane backwashed?	Text	None
5	3	Is the backwashing procedure fully automatic?	YesNo	Yes
6	3	Is chemical cleaning periodical accomplished?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
7	3	Is adequate monitoring being conducted to prevent premature fouling?	YesNo	Yes
8	3	Is the unit properly sealed to prevent leakage?	YesNo	Yes
9	3	What is the percent waste stream?	Numeric	None
10	3	Is adequate monitoring in place to insure membrane integrity?	YesNo	Yes
11	3	How is the waste stream disposed of?	Text	None

Treatment / Flocculation

Flocculation:

1		Are the flocculators equipped with variable speed controls?	YesNo	Yes
2		Is baffling incorporated into the units to enhance the flocculation process?	YesNo	Yes
3		Is there a detention time for floc formation of at least 30 minutes?	YesNo	Yes
4		Is the flow-through velocity not less than 0.5 nor greater than 1.5 feet per minute?	YesNo	Yes
5		Is a drain and/or pumps provided to handle dewatering and sludge removal?	YesNo	Yes
6		Is there an SOP for adjusting flocculator speed?	YesNo	Yes
7		Is there evidence of short-circuiting resulting in poor floc formation?	YesNo	No
8		Does the inlet and outlet design prevent short-circuiting and destruction of floc?	YesNo	Yes

Treatment / Fluoridation

General:

1	2	Are fluoride concentrations tested in the system daily?	YesNo	Yes
2	2	When was the last time the testing instrument was calibrated?	Date	None

Treatment / Fluoridation

Fluoridation:

1		Are the saturators of the up-flow type?	YesNo	None
2		Units of actual pumping capacity?	DropDown	None
3	3	Is the make-up water properly treated for hardness, when necessary?	YesNo	Yes
4	2	Is the dilution water line protected from the potential for backflow conditions to exist?	YesNo	Yes
5	3	Is there a flowmeter on the inlet water supply line to a saturator?	YesNo	Yes
6	3	Is there an adequate level of fluoride crystals in the saturator?	YesNo	Yes
7	3	How often is the saturator tank disassembled and cleaned?	DropDown	None
8	2	Is there a fail-safe device, such as a flow sensor, incorporated in the fluoride feed control system to prevent overfeeding fluoride?	YesNo	Yes
9	1	Does the sodium fluoride, sodium silicofluoride and hydrofluosilicic acid comply with third party standards such as ANSI/NSF?	YesNo	Yes
10	3	Are fluoride chemicals isolated from other chemicals to prevent contamination?	YesNo	Yes
11	3	Are fluoride compounds stored in covered or unopened shipping containers and stored inside a building?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
12	3	How often are feeders calibrated to insure accuracy?	DropDown	None
13	3	Are bags, fiber drums and steel drums stored on pallets?	YesNo	Yes
14		Is hydrofluosilicic acid used?	YesNoLeadin	None
14.01	2	In an acid feed system, is the solution tank mounted on a scale so that the total quantity of fluoride used each day can be calculated and recorded?	YesNo	Yes
14.02	3	Are deluge showers and eye wash devices provided at all fluorosilicic acid installations?	YesNo	Yes
14.03	3	Are unsealed storage units for hydrofluorosilicic acid vented to the atmosphere at a point outside any building?	YesNo	Yes

Treatment / Inhibitor Addition

General:

2	3	Is test data available that characterizes the corrosive nature of the raw water?	YesNo	Yes
4	3	Is the test equipment to monitor the data appropriate and in good working order?	YesNo	Yes

Treatment / Inhibitor Addition

Bimetallic Phosphate:

1	3	Are phosphates fed into the drinking water for corrosion control?	YesNo	None
2	3	Is ph/alkalinity adjustment used as a corrosion control strategy? If so what chemicals are being utilized?	Text	None
3	3	Are phosphates fed into the drinking water in conjunction with pH adjustment?	YesNo	None
4	2	Have all proprietary compounds received the specific approval of the reviewing authority before use?	YesNo	Yes
5	2	Are satisfactory chlorine residuals maintained in the distribution system when phosphates are used?	YesNo	Yes
6	3	Is phosphate testing conducted in the distribution system?	YesNo	Yes

Treatment / Inhibitor Addition

Hexametaphosphate:

1	3	Are phosphates fed into the drinking water for corrosion control?	YesNo	None
2	3	Is ph/alkalinity adjustment used as a corrosion control strategy? If so what chemicals are being utilized?	Text	None
3	3	Are phosphates fed into the drinking water in conjunction with pH adjustment?	YesNo	None
4	2	Have all proprietary compounds received the specific approval of the reviewing authority before use?	YesNo	Yes
5	2	Are satisfactory chlorine residuals maintained in the distribution system when phosphates are used?	YesNo	Yes
6	3	Is phosphate testing conducted in the distribution system?	YesNo	Yes

Treatment / Inhibitor Addition

Orthophosphate:

1	3	Are phosphates fed into the drinking water for corrosion control?	YesNo	None
2	3	Is ph/alkalinity adjustment used as a corrosion control strategy? If so what chemicals are being utilized?	Text	None
3	3	Are phosphates fed into the drinking water in conjunction with pH adjustment?	YesNo	None

Sanitary Survey Questions --- Utah

4	2	Have all proprietary compounds received the specific approval of the reviewing authority before use?	YesNo	Yes
5	2	Are satisfactory chlorine residuals maintained in the distribution system when phosphates are used?	YesNo	Yes
6	3	Is phosphate testing conducted in the distribution system?	YesNo	Yes

Treatment / Inhibitor Addition**Polyphosphate:**

1	3	Are phosphates fed into the drinking water for corrosion control?	YesNo	None
2	3	Is ph/alkalinity adjustment used as a corrosion control strategy? If so what chemicals are being utilized?	Text	None
3	3	Are phosphates fed into the drinking water in conjunction with pH adjustment?	YesNo	None
4	2	Have all proprietary compounds received the specific approval of the reviewing authority before use?	YesNo	Yes
5	2	Are satisfactory chlorine residuals maintained in the distribution system when phosphates are used?	YesNo	Yes
6	3	Is phosphate testing conducted in the distribution system?	YesNo	Yes

Treatment / Ion Exchange**General:**

2	4	Is the ion exchange unit of the upflow or downflow design?	DropDown	None
5	4	Is the depth of the exchange resin less than 3 feet?	YesNo	No
6	3	Is the backwash rate 6 to 8 gallons per minute per square foot of bed area (14 - 20 m/hr)?	YesNo	Yes
7	3	Are rate-of-flow controllers or the equivalent installed to control flow rates?	YesNo	Yes
10	2	Are backwash, rinse and air relief discharge pipes installed in such a manner as to prevent any possibility of back-siphonage?	YesNo	Yes
11	2	Is the salt that is used for the brine solution approved by an ANSI/NSF accredited organization?	YesNo	Yes
13	3	Are salt dissolving or brine tanks and wet salt storage tanks covered and corrosion-resistant?	YesNo	Yes
14	2	Is the make-up water inlet protected from back-siphonage?	YesNo	Yes
19	2	Are overflows protected with corrosion resistant screens and terminate with either a turned down bend having a proper free fall discharge?	YesNo	Yes
24	3	If a pump is used to transfer brine, is a brine measuring tank or means of metering provided to obtain proper dilution?	YesNo	Yes
25	3	Is suitable disposal provided for brine waste?	YesNo	Yes
29	4	Is bagged salt and dry bulk salt storage enclosed and separated from other operating areas in order to prevent damage to equipment?	YesNo	Yes

Treatment / Ion Exchange**Ion Exchange:**

1	4	Is iron or manganese removed using ion exchange?	YesNoLeadin	None
1.1	3	If yes, does the water contain more than 0.3 milligrams per liter of iron, manganese or combination thereof?	YesNo	No
1.2	3	Does the raw water or wash water contain dissolved oxygen or other oxidants?	YesNo	No
2	3	When iron, manganese, or a combination of the two, is 1 milligram per liter or more is pre-treatment being used?	YesNoLeadin	Yes
2.01	3	If yes, is the automatic regeneration based on volume of water softened?	YesNo	Yes

Question	Number	Sanitary Survey Questions --- Utah	Response Type	Correct Response
2.02	3	Does the design capacity for hardness removal exceed 20,000 grains per cubic foot (46 kg/m3) when resin is regenerated with 0.3 pounds (0.14 kg) of salt per kilogram of hardness removed?	YesNo	No
2.03	3	Does the rate of softening exceed 7 gallons per minute per square foot of bed area?	YesNo	No
2.04	3	Are smooth nosed taps located to provide for sampling of the softener influent, effluent and blended water?	YesNo	Yes
2.05	3	Is a bypass provided around softening units to produce a blended water of desirable hardness?	YesNo	Yes
2.06	3	Are totalizing meters installed on the bypass line and on each softener unit?	YesNo	Yes
2.07	3	Does the bypass line have a shutoff valve?	YesNo	Yes
2.08	3	Does the bypass line have an automatic proportioning or regulating device?	YesNo	Yes

Treatment / Lime - Soda Ash Addition

General:

1	3	Is test equipment for alkalinity, total hardness, carbon dioxide content, and pH provided to determine treatment effectiveness?	YesNo	Yes
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Treatment / Rapid Mix

Rapid Mix:

1	3	Is the lime and recycled sludge fed directly into the rapid mix basin?	YesNo	Yes
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Treatment / Sedimentation

General:

1	3	Are the clarification units constructed to permit units to be taken out of service without disrupting operation?	YesNo	Yes
3	3	Does it appear that there is short circuiting in the sedimentation basin?	YesNo	No
4	3	Is there significant floc carryover out of the sedimentation basins going to the filters?	YesNo	No
5	3	What process control testing is performed on the settled water?	Text	None
6	4	Is mechanical sludge collection equipment provided?	YesNo	Yes
7	3	Are the basins provided with a convenient means for dewatering that minimizes down time?	YesNo	Yes
8	3	Is the system designed so that the operator may observe and sample sludge being withdrawn from the unit?	YesNo	Yes

Treatment / Sedimentation

Sedimentation:

1		Does the facility use tube/plate settlers?	YesNoLeadin	None
1.1	3	If yes, Are the settlers protected from freezing? (outdoor installations must provide sufficient freeboard above the top of settlers to prevent freezing in the units)	YesNo	Yes
1.4	4	Are flushing lines provided to facilitate maintenance?	YesNo	Yes
2		Does the facility use solids contact clarifiers?	YesNoLeadin	None
2.01	3	If yes, based on design flow rates, are two to four hours of detention time provided for solids contact clarifiers treating surface water?	YesNo	Yes
2.02	3	Are chemicals added in a manner to insure satisfactory mixing of the chemicals with the water?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
2.03	3	Are mixing devices providing good mixing of the raw water with previously formed sludge particles?	YesNo	Yes
2.04	3	Are mixing devices preventing the deposition of solids in the mixing zone?	YesNo	Yes
2.05	4	Does the mixing equipment provide for coagulation in a separate chamber or in a baffled zone within the unit?	DropDown	None
2.06	3	Is adequate piping with suitable sampling taps located as to permit the collection of samples of water from critical portions of the units?	YesNo	Yes
2.07	3	Is the system designed so that the operator may observe and sample sludge being withdrawn from the unit?	YesNo	Yes
2.08	4	Does the equipment provide either internal or external concentrators in order to obtain a concentrated sludge with a minimum of wastewater?	YesNo	Yes
2.09	2	Is cross-connection control included for the potable water lines used to backflush sludge lines?	YesNo	Yes
2.11	3	Are units provided with suitable controls for sludge withdrawal?	YesNo	Yes
2.12	4	Do total water losses exceed 5 percent for clarifiers?	YesNo	No
2.13	4	Do total water losses exceed 3 percent for softening units?	YesNo	No
2.14	4	Are the weirs adjustable, and at least equivalent in length to the perimeter of the tank?	YesNo	Yes

Treatment / Sequestration

General:

1	4	Does the raw water have Fe levels greater than 0.3 mg/l?	YesNo	None
2		Does the raw water have Mn levels greater than 0.05 mg/l?	YesNo	None
3	3	Are taps located on each raw water source, each treatment unit influent and each treatment unit effluent?	YesNo	Yes
4	3	Are smooth-nosed sampling taps provided for process control purposes?	YesNo	Yes
5	3	Does the test equipment have the capacity to accurately measure the iron content to a minimum of 0.10 milligrams per liter and the manganese content to a minimum of 0.02 milligrams per liter?	YesNo	Yes

Treatment / Sequestration

Sequestration:

1	4	Is iron and/or manganese being sequestered by the addition of a phosphate?	YesNoLeadIn	None
1.1	4	If yes, is the iron, manganese or combination thereof less than 1 milligram per liter in the raw water?	YesNo	Yes
2	4	If no iron or manganese removal treatment is provided, is the point of application of the phosphates prior to any aeration, oxidation or disinfection?	YesNo	Yes
3	4	Does the total phosphate applied exceed 10 milligrams per liter as PO4?	YesNo	No
4	3	Are stock phosphate solutions kept covered and disinfected by carrying approximately 10 milligrams per liter free chlorine residual? (Phosphate solutions having a pH of 2.0 or less may be exempted from this requirement by the reviewing authority)	YesNo	Yes
5	3	Where phosphate sequestration is practiced, is appropriate phosphate testing equipment provided?	YesNo	Yes
6	3	Where phosphate treatment is used, are satisfactory chlorine residuals maintained in the distribution system?	YesNo	Yes

Pump Stations / Operation

1	3	Is the building in good structural condition?	YesNo	Yes
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QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
2	3	Is the building orderly and clean?	YesNo	Yes
3	3	Is safety equipment adequate?	YesNo	Yes
4	4	Is there any leaking water from the piping or appurtenances?	YesNo	No
5	4	If there is a stuffing box / packing unit for cooling the pump drive shaft, is the leakage rate greater than 2 - 4 drops per second?	YesNo	No
6	3	Is there any dirt / grime around the pump or motor?	YesNo	No
7	3	Is there any leaking lubricant around the pump or motor?	YesNo	No
8	3	Is rotating and electrical equipment provided with protective guards?	YesNo	Yes
9	3	Are the correct types of lubricant used?	YesNo	Yes
10		Are pump or drive shaft bearings oil lubricated?	YesNoLeadIn	None
10.01	2	If yes, is the oil approved by an ANSI accredited organization?	YesNo	Yes
11	3	Is the frequency and amount of lubrication adequate?	YesNo	Yes
12	2	Is there any excessive noise/ vibration/ heat/ odors?	YesNo	No
13		What is the maximum number of duty cycles (on/off) that this pump operates? (per hour or per day)	Numeric	None
14	3	Are the duty cycle rates excessive?	YesNo	No
15	3	Is the control system set to prevent excessive cycling of the pump?	YesNo	Yes
16	2	Are toxic chemicals, hazardous or flammable materials or lubricants stored inside the pumping station?	YesNo	No
17	3	Are adequate operational records maintained for pumping facilities?	YesNo	Yes
18	3	Is the pumping station and it's components included in a preventive maintenance schedule?	YesNo	Yes
19	3	Are valves exercised regularly?	YesNo	Yes
20	3	Are all appurtenances in good condition and functioning properly?	YesNo	Yes
21	2	Are the controls adequately maintained and in good working order?	YesNo	Yes

Pump Stations / Design

1		What type of pump(s) are at this pumping station?	DropDown	None
2	2	Is the type of pump suitable to the application?	YesNo	Yes
3		How many pumping units are provided?	Numeric	None
4		How many parallel pumps are provided at this location?	Numeric	None
5	2	Are there at least two equal and functioning pumping units? (Note: For well systems, consider other wells)	YesNo	Yes
6	2	Can the demand be met by the remaining pump(s) when the largest pumping unit is out of service?	YesNo	Yes
7	2	Is the building and equipment protected from flooding?	YesNo	Yes
8	3	Is proper drainage provided?	YesNo	Yes
9	3	Is heating, ventilation, and lighting adequate?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
10	3	Can equipment be accessed for maintenance and removal from the building?	YesNo	Yes
11	2	Are cross-connections present in pumping stations?	YesNo	No
12		Is each pump discharge line equipped with:	Header	None
12.01	2	a positive-acting check valve between the pump and the isolation valve?	YesNo	Yes
12.02	3	isolation gate valves?	YesNo	Yes
12.03	4	pressure gauge?	YesNo	Yes
12.04	3	flow meter?	YesNo	Yes
12.05	3	blow-off line	YesNo	Yes
13	3	Are gate valves located on suction and discharge sides of each pump (flooded suction applications)?	YesNo	Yes
14	3	Is an air release valve located between the source and check valve? (Recommended for Vertical Turbine Pumps)	YesNoLeadIn	Yes
14.01	2	Is the discharge line from the air release valve properly protected to prevent the entrance of contaminants?	YesNo	Yes
15		Are the pumps controlled manually?	YesNoLeadIn	None
15.01	2	Is this suitable to the application of the pumping station?	YesNo	Yes
16		Are pumps controlled automatically?	YesNoLeadIn	None
16.01		What type of automatic control function is used?	DropDown	None
16.02	2	Is the type of automatic control suitable to the application of the pumping station?	YesNo	Yes
17	2	Do the controls include an adequate failure alarm system?	YesNo	Yes
18		Are chemical feeders tied to the pump controls?	YesNoLeadIn	None
18.01		If yes, what chemicals are fed?	Text	None
18.02	2	Do the controls include a fail-safe device to stop chemical feed in the event of loss of water flow?	YesNo	Yes
19	4	Do the controls include elapsed time meters (ETMs)	YesNo	Yes
20	3	Are all controls protected inside a waterproof cabinet?	YesNo	Yes
21	2	Does the pump station have automatic signaling apparatus which will report when the station is out of service?	YesNo	Yes
22		Does the system control pumps through a SCADA system?	YesNoLeadIn	None
22.01	2	If yes, and the SCADA system is out of service, can personnel operate the system manually?	YesNo	Yes

Pump Stations / Operation

1	3	Is the building in good structural condition?	YesNo	Yes
2	3	Is the building orderly and clean?	YesNo	Yes
3	3	Is safety equipment adequate?	YesNo	Yes
4	4	Is there any leaking water from the piping or appurtenances?	YesNo	No
5	4	If there is a stuffing box / packing unit for cooling the pump drive shaft, is the leakage rate greater than 2 - 4 drops per second?	YesNo	No

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
6	3	Is there any dirt / grime around the pump or motor?	YesNo	No
7	3	Is there any leaking lubricant around the pump or motor?	YesNo	No
8	3	Is rotating and electrical equipment provided with protective guards?	YesNo	Yes
9	3	Are the correct types of lubricant used?	YesNo	Yes
10		Are pump or drive shaft bearings oil lubricated?	YesNoLeadin	None
10.01	2	If yes, is the oil approved by an ANSI accredited organization?	YesNo	Yes
11	3	Is the frequency and amount of lubrication adequate?	YesNo	Yes
12	2	Is there any excessive noise/ vibration/ heat/ odors?	YesNo	No
13		What is the maximum number of duty cycles (on/off) that this pump operates? (per hour or per day)	Numeric	None
14	3	Are the duty cycle rates excessive?	YesNo	No
15	3	Is the control system set to prevent excessive cycling of the pump?	YesNo	Yes
16	2	Are toxic chemicals, hazardous or flammable materials or lubricants stored inside the pumping station?	YesNo	No
17	3	Are adequate operational records maintained for pumping facilities?	YesNo	Yes
18	3	Is the pumping station and it's components included in a preventive maintenance schedule?	YesNo	Yes
19	3	Are valves exercised regularly?	YesNo	Yes
20	3	Are all appurtenances in good condition and functioning properly?	YesNo	Yes
21	2	Are the controls adequately maintained and in good working order?	YesNo	Yes

Storage / General

1	3	Is there a maintenance program for storage tanks?	YesNo	Yes
2	2	Are there provisions designed in for draining and cleaning of the storage tank?	YesNo	Yes

Storage / Gravity

Design:

1		Is the storage structure secure from unauthorized access?	YesNo	Yes
2		Is the area surrounding the ground-level storage structure graded in a manner that will prevent surface water from standing within 50 feet of it?	YesNo	Yes
3		Does the storage reservoir have a watertight roof or cover and is it sloped so that water will drain?	YesNo	Yes
4	3	Is the storage capacity adequate to meet the average daily consumption?	YesNo	Yes

Storage / Gravity

Components:

1	3	Do all water storage structures have ladders, ladder guards, balcony railings, and safely located entrance hatches provided where applicable?	YesNo	Yes
2		Are air vents:	Header	None
2.01		Turned downward or covered from rain?	YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah	Response Type	Correct Response
2.02	Terminated at a minimum of 24 to 36 inches above the surface of storage tank roof?	YesNo	Yes
2.03	Screened with #14 non-corrodable mesh screen with a larger guage protection screen (ie #4)?	YesNo	Yes
3	Are access opening covers greater than or equal to 4 inches above the tank roof surface (18 inches above any earthen cover)?	YesNo	Yes
4	Is the access opening overlapping, water tight, and the the lid properly gasketed?	YesNo	Yes
5	Are outside access hatches locked?	YesNo	Yes
6	Is there a roof penetration for a water level indicator cable, if so does the cable pass through a tight-fitting grommet?	YesNo	Yes
7	Are there other roof penetrations, if so, are they sealed?	YesNo	Yes
8	Are overflow pipes:	Header	None
8.01	Terminated 12 to 24 inches above the ground?	YesNo	Yes
8.02	Screened with #4 mesh non-corrodable screen?	YesNo	Yes
8.03	Directly connected to a storm sewer or sanitary sewer?	YesNo	Yes
9	If a drain line is present, is it properly screened with #4 mesh non-corrodible mesh screen and discharge through a physical air gap of at least 2 pipe diameters?	YesNo	Yes

Storage / Gravity

Operation:

1	3	If the tank is a wooden tank, is it operated in a manner to minimize an increase in bacterial count?	YesNo	Yes
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Storage / Gravity

Maintenance:

1	Are there cracks in the walls or covers of the in-ground concrete storage tanks?	YesNo	No
2	Is the storage structure interior coating or liner peeling or cracked?	YesNo	No
3	Is leakage evident at time of inspection?	YesNo	No

Storage / Clear-Wells

Design:

1	Is the storage structure secure from unauthorized access?	YesNo	Yes
2	Is the area surrounding the ground-level storage structure graded in a manner that will prevent surface water from standing within 50 feet of it?	YesNo	Yes
3	Does the storage reservoir have a watertight roof or cover and is it sloped so that water will drain?	YesNo	Yes
4	3 Is the clear-well constructed with baffles?	YesNo	None

Storage / Clear-Wells

Components:

1	Is all treated water storage covered?	YesNo	Yes
2	Are overflow pipes:	Header	None
2.01	Terminated 12 to 24 inches above the ground?	YesNo	Yes

QuestionNumber		Sanitary Survey Questions --- Utah	Response Type	Correct Response
2.02		Screened with #4 mesh non-corrodable screen?	YesNo	Yes
2.03		Directly connected to a storm sewer or sanitary sewer?	YesNo	Yes
3		Are air vents:	Header	None
3.01		Turned downward or covered from rain?	YesNo	Yes
3.02		Terminated at a minimum of 24 to 36 inches above the surface of storage tank roof?	YesNo	Yes
3.03		Screened with #14 non-corrodable mesh screen with a larger guage protection screen (ie #4)?	YesNo	Yes
4		Are access opening covers overlapping, water tight, and greater than or equal to 4 inches above the tank roof surface?	YesNo	Yes
5		Is the lid properly gasketed?	YesNo	Yes
6		Are outside access hatches locked?	YesNo	Yes
7		Is there a roof penetration for a water level indicator cable, if so does the cable pass through a tight-fitting grommet?	YesNo	Yes
8		Are there other roof penetrations, if so, are they sealed?	YesNo	Yes
9		Does the tank appear to be structurally sound?	YesNo	Yes

Storage / Clear-Wells

Maintenance:

1		Are there cracks in the walls or covers of the in-ground concrete storage tanks?	YesNo	No
2		Is the storage structure interior coating or liner peeling or cracked?	YesNo	No
3		Is leakage evident at time of inspection?	YesNo	No
4		Are there provisions established for maintainng the water supply when the storage tank is out of service for maintenance?	YesNo	Yes

Storage / Hydropneumatic

Design:

1		Is the hydropneumatic tank(s) the only storage facility?	YesNo	No
2	3	Is the tank(s) located above the ground surface and completely housed?	YesNo	Yes
4	2	Are back-up systems provided?	YesNo	None
5	2	Does the hydropneumatic tank(s) have a bypass piping to permit operation of the system while it is being repaired or painted?	YesNo	Yes
6		Do the hydropneumatic tank(s) have the following:	Header	None
6.1	3	An access manhole (24 inches in diameter where practical)?	YesNo	Yes
	3	A drain?	YesNo	Yes
6.3	2	Pressure gauge?	YesNo	Yes
6.4	3	Water sight glass?	YesNo	Yes
6.5	3	Automatic or manual air blow-off?	YesNo	Yes
6.6	2	Automatic pressure relief valve?	YesNo	Yes
6.7	2	Automatic vacuum relief valve?	YesNo	Yes

QuestionNumber		Sanitary Survey Questions --- Utah		Response Type	Correct Response
6.8	3	Means to add air?		YesNo	Yes
6.9	2	Pressure operated start-stop controls for the pumps?		YesNo	Yes
<u>Storage / Hydropneumatic</u>					
Components:					
1	2	Are the tank and controls properly protected?		YesNo	Yes
2	3	Are the interior and exterior surfaces in good condition?		YesNo	Yes
3	2	Are tank supports adequate and structurally sound?		YesNo	Yes
4	3	If provided, is the outside hatch in good condition?		YesNo	Yes
5	2	Is the recharge air free of pollutants such as oil from an air compressor?		YesNo	Yes
<u>Storage / Hydropneumatic</u>					
Controls:					
1	2	Are instruments and controls adequate and operational?		YesNo	Yes
2	2	Are the instruments utilized and maintained?		YesNo	Yes
<u>Storage / Hydropneumatic</u>					
Operation:					
1	3	Is the water to air ratio between 1:1 and 2:1?		YesNo	Yes
2	3	Does the supply pump cycle between 30 psi (cut-in point) and 70 psi (cut-out point)?		YesNo	Yes
3	2	Are procedures established for maintaining system pressure during periods when the tank is out of service?		YesNo	Yes
<u>Storage / Hydropneumatic</u>					
Maintenance:					
1		Is leakage evident at time of inspection?		YesNo	No
2		Are there provisions established for maintainng the water supply when the storage tank is out of service for maintenance?		YesNo	Yes
3		Are there provisions designed in for draining and cleaning of the storage reservoir?+		YesNo	Yes
<u>Distribution / Design</u>					
1		Do any water lines have dead ends?		YesNo	No
2	2	Do all water mains that provide fire flow have a diameter of at least 8 inches?		YesNo	Yes
3		Are separate pressure zones provided?		YesNoLeadIn	None
3.1	3	If yes, are there automatic operating pressure regulating valves (PRV's) separating the zones?		YesNo	Yes
4	4	Was asbestos/cement pipe used in the system?		YesNoLeadIn	No
4.1	2	If yes, has asbestos analysis been done?		YesNo	Yes

QuestionNumber	Sanitary Survey Questions --- Utah		Response Type	Correct Response
5	3	Are all materials used in the system manufactured according to ANSI/AWWA Standards?	YesNo	Yes
6	3	Are water and sewer (sanitary or storm) mains separated by a horizontal distance of 10 ft. or greater?	YesNo	Yes

Distribution / Pressure/Flow

1	2	Is the PWS capable of providing sufficient water during maximum hourly demand conditions (including fire flow) to maintain a minimum pressure of 20 psi within the system measured at all points of connections?	YesNo	Yes
2	3	Does the system maintain a minimum working pressure of 35 psi and a normal working pressure of 60 psi measured at the consumer's tap?	YesNo	Yes
3	2	Are there areas with chronic low pressure problems?	YesNo	No
4	3	Is the fire flow adequate?	YesNo	Yes
7	2	If there are pressure zones controlled by automatic Pressure Regulating Valves (PRVs), do they work properly?	YesNo	Yes

Distribution / Air & Vacuum Release Valves

1		Are air and vacuum release valves used in the system?	YesNoLeadin	None
1.01		Is the vent line properly screened (#14 mesh) and down turned?	YesNo	Yes
1.02		Is the valve chamber subject to flooding?	YesNo	No
1.03		Does the valve chamber have a drain?	YesNoLeadin	Yes
1.04		Does the chamber drain to day light? The drain shall not connect directly to any storm drain or sewer.	YesNo	Yes

Distribution / Pressure Relief Valves

1		How many PRVs are there? (list locations in comment field if needed)	Numeric	None
2		Are they designed to handle a wide range of flows?	YesNo	None

Distribution / Cross-Connections

1		Are backflow preventers installed with isolation valves to facilitate removal and maintenance?	YesNo	Yes
2	2	Are there any unprotected connections between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system?	YesNo	No
3		Are any all backflow preventors installed properly (i.e. RP assemblies installed in a pit)?	YesNo	No
4	2	Are there cross-connections in the distribution systems which are owned or controlled by the water system?	YesNo	No
5		Are all drains provided with a suitable air gap (ie RP assemblies, tanks,etc.)?	YesNo	Yes
6	2	Does the water system have a program to control the use of fire hydrants?	YesNo	Yes
7	2	Are blow offs connected to sanitary or storm sewers or do they exit below flood level in ditches or streams?	YesNo	No
8	2	Does the discharge piping on all air relief valves extend a proper distance above ground and flood level?	YesNo	Yes

Sanitary Survey Questions --- Utah

9	2	Are the backflow prevention devices installed and tested at each site where backflow could cause a reduction in water quality?	YesNo	Yes
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Distribution / Disinfection

1	2	Are chlorine residuals tested at least three times a week in the distribution system?	YesNo	Yes
2	2	Is the residual at least 0.2 mg/L prior to the first customer?	YesNo	Yes
3	2	Is at least a trace of residual maintained at all points in the distribution system?	YesNo	Yes
4	2	Are there an adequate number of sample sites and do they provide a representative sample of system conditions?	YesNo	Yes
7	2	Does your water facility disinfection procedures meet the AWWA C-601, 602, 651, 652 Standards for disinfection?	YesNo	Yes

Distribution / Maintenance

1	3	Is there a valve exercising program?	YesNoLeadin	Yes
1.1		If yes, how often are the valves exercised?	DropDown	None
1.2	4	Is the number of turns required to close and open the valve recorded?	YesNo	Yes
2	3	Is there a water main flushing program?	YesNoLeadin	Yes
2.1	3	If yes, is a systematic and unidirectional process used?	YesNo	Yes
2.2	3	Is there a written set of procedures for conducting unidirectional flushing?	YesNo	Yes
2.3		How frequently is unidirectional flushing performed?	DropDown	None
3	2	Are all dead end water mains equipped with a means to flush the line?	YesNo	Yes
4	3	Are dead end water mains flushed at least semiannually?	YesNo	None

Distribution / Repairs

1		What is the frequency of main breaks per year?	Numeric	None
2		Are the breaks primarily in one area?	YesNoLeadin	None
2.1		What type of pipe is involved?	DropDown	None
3		Does your water system disinfection procedures meet the AWWA C-601, 602, 651, 652 Standards for disinfection?	YesNo	Yes